

Claims:

1. A local switch for use in a broadband telecommunications system, comprising:

- a) a trunk interface for coupling the switch to an optical network carrying a plurality of audio/video channels; and
- b) a plurality of line cards coupled to said trunk interface, each line card having a plurality of dsl modems for coupling to a plurality of digital subscriber lines, each line card having multicasting means for replicating an audio/video channel being transmitted on one digital subscriber line coupled to the card for transmission on the same or another digital subscriber line coupled to the card.

2. A local switch according to claim 1, further comprising:

- c) a switch controller coupled to said trunk interface and to said line cards, wherein said switch controller routes selected audio/video channels from said trunk interface to said line cards.

3. A local switch according to claim 2, further comprising:

d) an ATM backplane, wherein

each of said trunk interface, said line cards, and said switch controller includes a core switching module coupled to said ATM backplane.

4. A local switch for use in a broadband telecommunications system, comprising:

a) a backplane having at least one ATM bus;

b) a plurality of core switch modules coupled to said backplane;

c) at least one trunk interface coupled to a first one of said core switch modules;

d) at least one system controller coupled to a second one of said core switch modules; and

e) at least one line card coupled to a third one of said core switch modules, said line card having a plurality of dsl modems for coupling to a plurality of digital subscriber lines.

5. A local switch according to claim 4, wherein:

each of said core switch modules includes ingress address translation means for translating addresses of ATM cells destined for the backplane and egress address translation means for translating addresses of ATM cells received from the backplane.

6. A local switch according to claim 5, wherein:

said backplane includes a plurality of ATM buses,

each of said core switch modules includes a plurality of bus drivers corresponding to the plurality of ATM buses.

7. A local switch according to claim 6, wherein:

sach of said core switch modules includes an ingress cell router coupled to said ingress address translation means and said bus drivers, and

sach of said core switch modules includes an egress cell multiplexer coupled to said egress address translation means and said bus drivers.

8. A local switch according to claim 7, wherein:

said backplane includes an Ethernet LAN, and

each of said core switch modules includes an Ethernet transceiver coupled to said Ethernet LAN.

9. A local switch according to claim 4, wherein:

said system controller includes a control module coupled to non-volatile memory.

10. A local switch according to claim 9, wherein:
said control module is a field programmable gate array, and
said non-volatile memory includes NVRAM and a flash disk.
11. A local switch according to claim 10, wherein:
said system controller includes a plurality of alarm relays
coupled to said field programmable gate array.
12. A local switch according to claim 4, wherein:
said system controller includes a UTOPIA interface coupled to
said second one of said core switch modules.
13. A local switch according to claim 4, wherein:
said trunk interface includes a plurality of OC-3c
transceivers and a Quad OC-3c framer.
14. A local switch according to claim 4, wherein:
said trunk interface includes an OC-12 transceiver.
15. A local switch according to claim 4, wherein:
said trunk interface includes a UTOPIA interface coupled to
said first one of said core switch modules.

16. A local switch according to claim 4, wherein:

said line card includes a UTOPIA interface coupled to a third one of said core switch modules.

17. A local switch according to claim 4, wherein:

said line card includes a UTOPIA bus, each of said plurality of dsl modems being coupled to said UTOPIA bus.

18. A local switch according to claim 4, wherein:

said line card includes a plurality of UTOPIA buses with a plurality of dsl modems being coupled to each of said UTOPIA buses.

19. A local switch according to claim 4, wherein:

said line card includes at least two UTOPIA buses with a plurality of dsl modems being coupled to one of said UTOPIA buses, and a daughter card interface being coupled to the other of said UTOPIA buses.

20. A local switch according to claim 4, wherein:

said line card includes two UTOPIA buses with four dsl modems coupled to each and two UTOPIA buses coupled to a daughter card interface.